

***LineUp With Math™* Alignment**
Minnesota Academic Standards
Mathematics

Strand I. MATHEMATICAL REASONING

Standard: Apply skills of mathematical representation, communication and reasoning throughout the remaining four content strands.

Benchmarks	<i>LineUp With Math™</i> Activities
1. Assess the reasonableness of a solution by comparing the solution to appropriate graphical or numerical estimates or by recognizing the feasibility of a solution in a given context.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
2. Appropriately use examples and counterexamples to make and test conjectures, justify solutions and explain results.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
3. Translate a problem described verbally or by tables, diagrams or graphs, into suitable mathematical language, solve the problem mathematically and interpret the result in the original context.	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.
4. Support mathematical results by explaining why the steps in a solution are valid and why a particular solution method is appropriate.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

Strand III. PATTERNS, FUNCTIONS AND ALGEBRA

Sub-Strand A. Patterns and Functions

Standard: Understand and describe progressions. Use graphs and tables to solve real-world and mathematical problems.

Benchmarks	<i>LineUp With Math™</i> Activities
2. Represent quantitative relationships graphically and use the graphs to solve real-world and mathematical problems.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

Sub-Strand B. Algebra (Algebraic Thinking)

Standard: Use algebraic operations to generate equivalent expressions, and use proportional reasoning to solve real-world and mathematical problems. Demonstrate the ability to manipulate an equation by applying arithmetic operations to both sides to maintain equivalence.

Benchmarks	<i>LineUp With Math™</i> Activities
2. Use simple formulas with more than one variable to solve real-world and mathematical problems.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

3. Use proportions and percents with one unknown quantity to solve real-world and mathematical problems.	<p>--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.</p> <p>--Use percent relationships to resolve distance, rate, time conflicts in air traffic control.</p>
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Strand V. SPATIAL SENSE, GEOMETRY AND MEASUREMENT

Sub-Strand C. Measurement

Standard: *Make calculations of time, length, area and volume within standard measuring systems, using good judgment in choice of units.*

<p>Benchmarks</p> <p>1. Find approximate equivalent measures of length, temperature and weight for common units in U.S. customary and metric measuring systems.</p>	<p>LineUp With MathTM Activities</p> <p>--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.</p>
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